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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,408	04/17/2006	Graham Alexander Munro Murdoch	61229-00003USPX	7500

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EXAMINER	
SYED, NABIL H	
ART UNIT	PAPER NUMBER
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MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,408	MURDOCH ET AL.	
	Examiner	Art Unit	
	/NABIL H. SYED/	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 20-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 20-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a non-final office action in response to the RCE filed on 2/18/09. Amendments received on 2/18/09 have been entered. Claims 1-18 and 20-63 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject mat04ter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 44 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. (5,606,323) in view of Strong et al. (US Pub 2003/0007473) and further in view of Gallagher, et al. (6,072,383).

As of claims 1, 44 and 61, Heinrich discloses an identification device for receiving a first signal and transmitting a second signal (via a transponder 11; see fig. 2), and an system for identifying articles (see fig. 1; also see col. 1, lines 11-14), the device including:

a receiving means for receiving the first signal and employing the first signal to generate

a voltage (via transponder 11 comprising an antenna (10) to receive the RF signal from the base station and a power rectifier (12) circuit to rectify the current for generating the power for the tag circuitry; see fig. 2; also see col. 1, lines 18-24) ;

wherein the receiving means generates a first current from the voltage; (via the antenna generating a first current; see col. 3, lines 60-64) ;

an integrated circuit, wherein the integrated circuit includes a state selection means for selecting whether the device is in a first state or a second state (via logic and memory circuits (14) and a switch (24) working together to change the state of the tag from first state to second state (see col. 4, lines 62 through col. 5, line 5);

a connection between the receiving means and the integrated circuit (via connection (29); see fig. 2) ;

a transmission means for generating the second signal (via antenna 10 transmitting the data back to the base station; see col. 3, lines 24-27);

wherein - relative to the second state - a relatively larger amount of the first current flows through the receiving means when the device is in the first state (via transponder 11 generating higher current while in the first state; see col. 3, lines 56 through col. 4, lines 8); and

wherein - relative to the first state - a relatively smaller amount of the first current flows through the receiving means when the device is in the second state (via transponder 11 generating lower current while in the second state; see col. 4, lines 8-16).

Heinrich further discloses that a base station generates a first signal to plurality of transponders (see fig. 1; also see 17-34; also see col. 1, lines 5-8).

However Heinrich fails to explicitly disclose that the state selection means randomly or pseudo-randomly selects whether the device is in a first state or a second state.

Strong discloses an identification system (see abstract), wherein the RFID tags have an active state (first state) and a sleep state (second state). Strong further discloses that during the sleep state tag uses less power (see paragraphs [0061] and [0063]). Strong further discloses that the processor in the tag uses a pseudorandom algorithm to switch the tag between the sleep sate and the active state (see paragraph [0064]). Strong further discloses that the identification system includes a plurality of tags which are associated with the assets and pluralities of tags are interrogated by at least one interrogator (see paragraph [0014] and [0017]), hence tags transmit response signal while they are in proximity of the other tags.

From the teaching of Strong it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Heinrich to include the function of randomly selecting the state of the tag as taught by Strong in order to prevent interference and collision when plurality of tags are transmitting at the same time.

However the combination of Heinrich and Strong fails to explicitly disclose that the relatively smaller amount of the first current causes the receiving means to not interfere with operation of a second identification device in close proximity to the identification device.

Gallagher discloses an RFID tag including a receiver and a transmitter (via antenna 20; see fig. 1), and an integrated circuit (via IC 18; see fig. 1). Gallagher further disclsoes that the RFID tag comprises a switch 30, wherein when the switch is opened the tag draws more current from the received electromagnetic field (first state) and when the switch is closed the tag draws less current from the received electromagnetic field (second state) (see col. 2, lines 65 through col. 3 lines 8; also see col. 6, lines 18-67). Gallagher further discloses that when the switch is closed, it is used to decouple the transponder form the environment, thereby minimizing the risk that the transponder will interfere with neighboring transponders (see col. 6, lines 64-67).

From the teaching of Gallagher it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Heinrich and Strong to include the state where the tag draws less current to not interfere with other transponder as taught by Gallagher in order to prevent interference and collision when plurality of tags are transmitting at the same time (see col. 6, lines 64-67).

4. Claims 2-27, 33-36, 39-46, 54-60, 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. in view of Strong et al. in view of Gallagher and further in view of Kubler et al. (6,525,648).

As of claims 2, 54, 62 and 63, the combination of Heinrich, Strong and Gallagher discloses all the limitations of the claimed invention as mentioned in claim 1 above but fails to explicitly disclose that a first and second probability is associated with the first

and second state respectively and the first probability is lower than the second probability.

Kubler discloses a RFID system wherein a remote system 106 (an identification device) has a zero power state (second state) and operational state (first state) wherein the probability of operational state is lower than the zero power state (see col. 7, lines 59-62).

From the teaching of Kubler it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Heinrich, Gallagher and Strong to include the function of associating the probability with the states as taught by Kubler in order to conserve power, such that for substantial periods of time no power is drawn from the limited power-capacity of the remote power supply (see col. 3, lines 50-55).

As of claims 3-6, 55 and 56, Kubler discloses that the remote data device 106 is in the zero power state (second state) about 23 hours and 59 minutes and in the operational state (first state) about 1 minute a day hence the first probability is at least two, four, eight and sixteen times lower than the second probability (see col. 7, line 66 through col. 8, line 2).

As of claims 7-16, Kubler discloses that the smaller current is three microAmp and the larger current is 80 miliAmp hence the smaller amount of current is less than approximately 100, 50, 30, 15, .1 and 4.99 and further smaller current is less than 50, 25, 5 and 1 percent of larger current (see col. 9, lines 66 through col. 10, lines 3 and col. 11, lines 56-60).

As of claim 17, Kubler discloses that the remote device 106 changes its state after receiving the signal from the base station and the timing of the RFID signals transmitted by the base station can be controlled by a system administrator so the probability of the second and first state are at least partially random because system administrator can transmit the data whenever data transfer is needed (see col. 8, lines 38-52).

As of claims 18, 19 and 63, Kubler discloses that the remote device 106, stays in one state at a time and remote device has an operating cycle during which the device performs the data transfer and then go back to the zero power state (see fig. 8; also see col. 12, lines 62 through col. 13, lines 6 and col. 13, lines 31-35).

As of claims 20-23, Heinrich discloses that the receiving means is an antenna and the antenna can be coil, a dipole antenna, and a capacitive antenna (via antenna 10; see col. 3, lines 40-47).

As of claim 24, Heinrich discloses that the first signal is at least a radio frequency signal (see col. 1, lines 18-22).

As of claims 25-27, Heinrich discloses that the connection includes a voltage multiplier or a voltage rectifier or a series regulator for controlling the voltage (via a rectifier or a voltage doubling circuit; see col. 4, lines 52-61; also see fig. 3).

As of claims 33 and 34, Kubler discloses that the remote device 106 changes the state when a signal is received from the base station and further base station can transmit a unique signal (signal breaks) to identify only the remote device that is desired (see col. 9, lines 20-25).

As of claims 35, 36, 45 and 46, Heinrich discloses that the transponder includes a memory (via logic and memory circuit 14; see fig. 2; also see col. 4, lines 62-66) and the memory of the tag includes at least one of content information, address information and name information (see col. 1, lines 52-57).

As of claim 39, Heinrich discloses that a transponder can include an onboard power source (via an active tag comprising a battery; see col. 1, lines 39-43).

As of claim 40-42, Heinrich discloses that a single antenna can be used to transmit or receive the signal from the base stations or two antennas, one to transmit and other to receive, can be used in a transponder (see col. 3, lines 39-45).

As of claim 43, Heinrich discloses that the state selection means includes a MOSFET transistor (see fig. 4; also see col. 5, lines 1-5).

As of claims 57-60, Heinrich discloses that state selection means is comprised of a plurality of digital circuits (via logic and memory circuits and switch 24; see fig. 2) and digital circuit is a controller comprising of logic arrays (via logic and memory circuits controlling the circuitry of the transponder; see col. 5, lines 24-26). Even though not explicitly said but since the logic and memory 14 is controlling the circuitry of the transponder 11, it has control the logic arrays of the tag.

5. Claims 28-32, 37, 38, 47- 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. , in view of Strong et al. in view of Gallagher and in view of Kubler as applied to claim 2 above, and further in view of Tuttle (5,970,398).

As of claims 28-32, 37 and 38 the combination of Heinrich, Strong and Kubler discloses all the limitations of the claimed invention as mentioned in claim 2 above, but

fails to explicitly disclose that identification device include an impedance means in series with the receiving means.

Tuttle discloses an antenna circuit configured for use in a radio frequency data communication device 14 constructed as an integral component of an identification postage stamp 24 wherein the postage stamp is formed from a thin sheet having a thickness of about .005 inches, and width and height of about 1.25 inches (see abstract; also see fig. 1). A Schottky diode (impedance means; fig. 3) is electrically coupled in serial relation with the antenna 18 of the communication device (see col. 6, lines 1-6). Tuttle further discloses that the receiver sensitivity of the transponder device 14 is adjusted by matching or mismatching the impedance of the antenna 18 with respect to a circuit element that has current adjustable impedance (see col. 5, lines 33-41). Tuttle also discloses that a large resistor 57 can also be included in the diode circuitry (see fig. 7; also see col. 8, lines 24-40).

From the teaching of Tuttle it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Heinrich, Strong and Kubler to include an impedance means in series with the antenna as taught by Tuttle in order to tuned and detuned the receiver sensitivity of the antenna to further extend the life of battery in the identification device (see col. 5, lines 13-20)

As of claims 47-53, Heinrich, Kubler and Tuttle disclose that the articles that have a tag embedded in their body are sorted by the information stored in the tag, and further articles could be documents, parcels, postage stamps and baggage. Tuttle discloses that the receiving sensitivity and transmitting sensitivity of the antenna can be adjusted

in order to achieve the desired signal sensitivity (see Kubler, col. 1, lines 26-67; also see Heinrich col. 1, lines 11-66; Tuttle col. 4, lines 42-45 and col. 5, lines 33-47).

Response to Arguments

6. As of claim, 1, 44 and 61, applicant argues that the combination of Heinrich and Strong fails to disclose “an integrated circuit including a state selection means for randomly or pseudo-randomly selecting whether the device is in a first state or second state.” The Examiner respectfully disagrees.

Strong discloses an identification system (see abstract), wherein the RFID tags have an active state (first state) and a sleep state (second state). Strong further discloses that during the sleep state tag uses less power (see paragraphs [0061] and [0063]). Strong further discloses that the processor in the tag uses a pseudorandom algorithm to switch the tag between the sleep sate and the active state (see paragraph [0064]-[0068]).

7. As of claim, 1, 44 and 61, applicant argument that the cited reference fail to disclose “that a relatively smaller amount of a first current causes a receiving means of an identification device to not interfere with operation a second identification device in close proximity to the identification device" have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to /NABIL H. SYED/ whose telephone number is (571)270-3028. The examiner can normally be reached on M-F 7:30-5:00 alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571)272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NABIL H SYED/
Examiner
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N.S

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